AMENDMENTS TO THE CLAIMS

1.(currently amended):   An IP communication interface device comprising:

first and second connecting units for making it possible to dispose between a

~~switched~~ circuit switched network and LAN connected to an IP packet switched network;

a first processing unit for coding first media-corresponding data as B-channel data

inputted to said first connecting unit from said ~~switched~~ circuit switched network, decoding

~~packet-deassembled~~ packet-disassembled media-corresponding data into which a packet of

second media-corresponding data inputted to said second connecting unit from said LAN is

~~deassembled~~ disassembled, and for transmitting the decoded media-corresponding data to said

first connecting unit for forwarding the same data as the first media-corresponding data to said

~~switched~~ circuit switched network;

a second processing unit for assembling the coded media-corresponding data

coded by said first processing unit into a packet, ~~deassembling~~ disassembling the packet of the

second media-corresponding data, and transmitting the same data as ~~packet-deassembled~~ packet-

disassembled media-corresponding data to said first processing unit; and

a third processing unit for generating the second media-corresponding data by

adding predetermined header data to ~~the~~ packet-assembled media-corresponding data assembled

into a packet by said second processing unit, forwarding the second media-corresponding data to

said LAN via said second connecting unit, removing the header data added to the second media-

corresponding data inputted to said second connecting unit, and transmitting the second media-

corresponding data with the header data removed to said second processing unit,

wherein the first and second media-corresponding data include voice data

transmitted from a voice terminal having a voice communication function, facsimile data

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transmitted from a facsimile terminal having a facsimile communication function and data

transmitted from a data terminal having a data communication function.

2. (canceled)

3.(currently amended):   An IP communication interface device according to ~~claim 2~~ claim 1, wherein said first and second processing units are functionally divided corresponding to the voice data, the facsimile data and the data that correspond to the first and second media-corresponding data, and

said IP communication interface device further comprises a selecting unit for selecting said first functionally divided processing unit in accordance with a command given from said third processing unit.

4.(currently amended): An IP communication interface device according to ~~claim 2~~ claim 1, wherein said second processing unit, when the first media-corresponding data are the voice data or the facsimile data, generates packet-assembled media-corresponding data to which an RTP for enabling a real time transport to be done is added.

5.(currently amended):   An IP communication interface device according to claim 4, wherein said second processing unit, when the second media-corresponding data are the voice data or the facsimile data, generates ~~packet-deassembled~~ packet-disassembled media-corresponding data from which the RTP for enabling the real time transport to be done is removed.

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6.(currently amended):   An IP communication interface device according to ~~claim 2~~ claim 1, wherein said third processing unit, when the packet-assembled media-corresponding data generated by said second processing unit are the voice data or the facsimile data, adds up a UDP header and an IP header as the header data, and, when the packet-assembled media-corresponding data are the essential data, adds a TCP header and an IP header as the header data.

7.(original):   An IP communication interface device according to claim 6, wherein said third processing unit, when the second media-corresponding data are the voice data or the facsimile data, removes the UDP header and the IP header are added as the header data, and, when the second media-corresponding data are the essential data, removes the TCP header and the IP header added as the header data.

8.(original):   An IP communication interface device according to claim 1, wherein said third processing unit identifies a call control signal as D-channel data in accordance with a message based on a specified protocol, and penetratingly transmits and receives the call control signal simply by adding and removing the TCP header and the IP header.

9.(original):   An IP communication interface device according to claim 1, wherein said first and second connecting units and said first, second and third processing units are mounted in a package card.

10.(currently amended):   A circuit switch comprising:

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a highway switch accommodating at least one of a voice terminal having a voice communication function, a facsimile terminal having a facsimile function and a data terminal having a data communication function, and including a time division multiplexing transmission path for transmitting data corresponding to media;

a first connecting unit connected directly to said highway switch;

a second connecting unit for accommodating a LAN line connected to an IP packet switched network;

a first processing unit for coding first media-corresponding data as B-channel data inputted to said first connecting unit, decoding ~~packet deassembled~~ <u>packet-disassembled</u> media-corresponding data into which a packet of second media-corresponding data inputted to said second connecting unit is ~~deassembled~~ <u>disassembled</u>, and transmitting the decoded media-corresponding data to said first connecting unit in order to forward the same decoded media-corresponding data as the first media-corresponding data to said highway switch;

a second processing unit for assembling the coded media-corresponding data coded by said first processing unit, ~~deassembling~~ <u>disassembling</u> the packet of the second media-corresponding data, and transmitting the second media-corresponding data as the ~~packet deassembled~~ <u>packet-disassembled</u> media-corresponding data to said first processing unit; and

a third processing unit for generating the second media-corresponding data by adding predetermined header data to ~~the~~ packet-assembled media-corresponding data assembled into a packet by said second processing unit, forwarding the second media-corresponding data to said LAN via second connecting unit, removing the header data added to the second media-corresponding data inputted to said second connecting unit, and transmitting the second media-corresponding data with the header data removed to said second processing unit.

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wherein the first and second media-corresponding data include voice data transmitted from the voice terminal having the voice communication function, facsimile data transmitted from the facsimile terminal having the facsimile communication function and data transmitted from the data terminal having the data communication function.

11. (canceled)

12.(currently amended): A circuit switch according to ~~claim 11~~ claim 10, wherein said first and second processing units are functionally divided corresponding to the voice data, the facsimile data and the data that correspond to the first and second media-corresponding data, and said IP communication interface device further ~~comprises~~ including a selecting unit for selecting said first functionally divided processing unit in accordance with a command given from said third processing unit.

13.(currently amended): A circuit switch according to ~~claim 11~~ claim 10, wherein said second processing unit, when the first media-corresponding data are the voice data or the facsimile data, generates packet-assembled media-corresponding data to which an RTP for enabling a real time transport to be done is added.

14.(currently amended): A circuit switch according to claim 13, wherein said second processing unit, when the second media-corresponding data are the voice data or the facsimile data, generates ~~packet-deassembled~~ packet-disassembled media-corresponding data from which the RTP for enabling the real time transport to be done is removed.

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15.(currently amended):   A circuit switch according to ~~claim 11~~ claim 10, wherein

said third processing unit, when the packet-assembled media-corresponding data generated by

said second processing unit are the voice data or the facsimile data, adds a UDP header and an IP

header as the header data, and, when the packet-assembled media-corresponding data are the

essential data, adds a TCP header and an IP header as the header data.

16.(original): A circuit switch according to claim 15, wherein said third processing unit,

when the second media-corresponding data are the voice data or the facsimile data, removes the

UDP header and the IP header added as the header data, and, when the second media-

corresponding data are the essential data, removes the TCP header and the IP header added as the

header data.

17.(original): A circuit switch according to claim 10, wherein said third processing unit

identifies a call control signal as D-channel data in accordance with a message based on a

specified protocol, and penetratingly transmits and receives the call control signal simply by

adding and removing the TCP header and the IP header.

18.(original): A circuit switch according to claim 10, wherein said first and second

connecting units and said first, second, and third processing units are mounted in a package card.

19.(currently amended):   An IP communication network system including a circuit

switch comprising:

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a highway switch accommodating at least one of a voice terminal having a voice communication function, a facsimile terminal having a facsimile function and a data terminal having a data communication function, and including a time division multiplexing transmission path for transmitting data corresponding to media;

a first connecting unit connected directly to said highway switch;

a second connecting unit for accommodating a LAN line connected to an IP packet switched network;

a first processing unit for coding first media-corresponding data as B-channel data inputted to said first-connecting unit, decoding ~~packet-deassembled~~ packet-disassembled media-corresponding data into which a packet of second media-corresponding data inputted to said second connecting unit is ~~deassembled~~ disassembled, and transmitting the decoded media-corresponding data to said first connecting unit in order to forward the same decoded media-corresponding data as the first media-corresponding data to said highway switch;

a second processing unit for assembling the coded media-corresponding data coded by said first processing unit, ~~deassembling~~ disassembling the packet of the second media-corresponding data, and transmitting the second media-corresponding data as the ~~packet-deassembled~~ packet-disassembled media-corresponding data to said first processing unit; and

a third processing unit for generating the second media-corresponding data by adding predetermined header data to ~~the~~ packet-assembled media-corresponding data assembled into a packet by said processing unit, forwarding the second media-corresponding data to said LAN via said second connecting unit, removing the header data added to the second media-corresponding data inputted to said second connecting unit, and transmitting the second media-corresponding data with the header data removed to said second processing unit.

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wherein the first and second media-corresponding data include the voice data transmitted from the voice terminal having the voice communication function, the facsimile data transmitted from the facsimile terminal having the facsimile communication function and the data transmitted from the data terminal having the data communication function.

20. (currently amended): An IP communication network system including an IP communication interface device comprising:

first and second connecting units for making it possible to dispose between a ~~switched~~ circuit switched network and LAN connected to an IP packet switched network;

a first processing unit for coding first media-corresponding data as B-channel data inputted to said first connecting unit from said ~~switched~~ circuit switched network, decoding ~~packet-deassembled~~ packet-disassembled media-corresponding data into which a packet of second media-corresponding data inputted to said second connecting unit from said LAN is ~~deassembled~~ disassembled, and for transmitting the decoded media-corresponding data to said first connecting unit for forwarding the same data as the first media-corresponding data to which said ~~switched~~ circuit switched network;

a second processing unit for assembling the coded media-corresponding data coded by said first processing unit into a packet, ~~deassembling~~ disassembled the packet of the second media-corresponding data, and transmitting the same data as ~~packet-deassembled~~ packet-disassembled media-corresponding data to said first processing unit; and

a third processing unit for generating the second media-corresponding data by adding predetermined header data to ~~the~~ packet-assembled media-corresponding data assembled into a packet by said second processing unit, forwarding the second media-corresponding data to

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said LAN via second connecting unit, removing the header data added to the second media-corresponding data inputted to said second connecting unit, and transmitting the second media-corresponding data with the header data removed to said second processing unit,

wherein the first and second media-corresponding data include voice data transmitted from a voice terminal having a voice communication function, facsimile data transmitted from a facsimile terminal having a facsimile communication function and data transmitted from a data terminal having a data communication function.

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